

even to the wings and tail; the continuity of the white only interrupted by a few isolated brown feathers sparsely scattered at irregular intervals over the body. Other specimens in the Academy Museum are in very nearly the plumage described by Gmelin and Latham as *P. Brasiliana*; so that there can be little doubt of the propriety of referring the latter to this species.*

The species and genera treated of in this paper are so few and so well known that an analytical synopsis does not seem to be required.

(To be continued.)

Description of twelve new species of UNIONIDÆ from South America.

BY ISAAC LEA.

The species described and figured in this paper were procured in South America by Don Patricio M. Paz, of Madrid, and very obligingly submitted to me. Some of them fortunately were in alcohol, thus preserving the soft parts, which are of great interest. These have been carefully examined and described, and it will be observed that the South American characteristics of the outer hard parts, as well as the included soft parts, which seem to pertain to the *Uniones* of that continent, are here exhibited. I allude more particularly to the *round palpi*, or mouth lips, and the *divergent fields* of the tips of the beaks, neither of which have I observed in our North American species. Very little attention, heretofore, has been given to the soft parts of the *Unionidæ* of South America, and none to the *embryonic shell*, except by myself. M. d'Orbigny, in his *Voyage dans l'Amerique Meridional*, has imperfectly described and figured the soft parts of some of the genera. Spix, in his *Testacea Fluviatilia Braziliensia*, takes no notice of the soft parts of the species, which he describes and figures with much accuracy.

UNIO PECULIARIS.—Testa lævi, quadrata, compressiuscula, inæquilaterali, postice obtuse angulata, antice rotunda: valvulis crassiusculis, antice aliquanto crassioribus; natibus subprominentibus, ad apices divaricati undulatis; epidermide virido-fusca, eradiata; dentibus cardinalibus parviusculis, compressis, obliquis, in utroque valvulo duplicibus; lateralibus longis, lamellatis curvisque; margarita cærul-o-alba et iridescente.

Embryonic Shell subtriangular, light brown; dorsal line rather long and straight; side margins irregular and unequal—one being a segment of a circle, the other an irregular curve line—forming an obtuse angle at the base; basal margin obtusely angular and furnished with hooks; granulate over the whole surface.

Hab.—South America, Don Patricio M. Paz.

This very peculiar and unique form is now for the first time observed. Its unequal lateral margins give it an abnormal and lapsed appearance, totally differing in this from any other species known to me.

UNIO FIRMUS.—Testa lævi, elliptica, subinflata, valde inæquilaterali, postice et antice rotundata; valvulis crassiusculis, antice aliquanto crassioribus; natibus prominulis; epidermide viridi-fusca, eradiata; dentibus cardinalibus subcrassis, compressis; in utroque valvulo duplicibus; lateralibus longis, lamellatis subcurvisque; margarita argentea et valde iridescente.

Hab.—South America, Don Patricio M. Paz.

UNIO RUGOSOSULCATUS.—Testa sulcata, triangulari, subinflata, subequilaterali, postice biangulata, antice oblique rotundata; valvulis percrassis, antice crassioribus; natibus prominentibus; epidermide olivacea, rugoso sulcata, obsolete radiata; dentibus cardinalibus crassis, rugosis, elevatis; later-

* Bonaparte (Consp. Av. ii. p. 172) makes the *Procellaria brasiliana* Gm. Lath. to be the bird now known as *Graculus* or *Phalacrocorax brasilianus*.

alibus sublongis, subcrassis, lamellatis subcurvisque; margarita argentea et iridescente.

Hab.—Central America? Don Patricio M. Paz.

UNIO APPRIMUS.—Testa lævi, elliptica, inflata, inæquilaterali, postice emarginata, obtuse angulata, antice rotundata; valvulis percrassis, antice crassioribus; natibus subprominentibus, ad apices divaricate undulatis; epidermide castanea, micanti, substriata, obsolete radiata; dentibus cardinalibus grandibus et valde partitis; lateralibus prælongis, lamellatis, curvatis et decore granulatis; margarita argentea et iridescente.

Hab.—South America, Don Patricio M. Paz.

UNIO LOCELLUS.—Testa lævi, elliptica, valde inflata, inæquilaterali, postice subrotundata, antice subtruncata; valvulis tenuibus; natibus subprominentibus, tumidis, ad apices divaricate undulatis; epidermide tenebroso-fusca, obsolete radiata, antice striata; dentibus cardinalibus parvis, valde compressis, valde obliquis, in utroque valvulo duplicibus; lateralibus parviusculis, lamellatis; margarita cæruleo-alba et iridescente.

Hab.—Buenos Ayres, South America, Don Patricio M. Paz.

UNIO PARCUS.—Testa lævi, late elliptica, subinflata, valde inæquilaterali; postice subrotundata, antice rotunda; valvulis subtenuibus, antice aliquanto crassioribus; natibus prominulis, ad apices divaricate undulatis; epidermide polita, tenebroso-oliva, eradiata; dentibus cardinalibus parviusculis, obliquis lamellatisque; lateralibus longis, lamellatis subrectisque; margarita cæruleo-alba et iridescente.

Hab.—South America, Don Patricio M. Paz.

UNIO ACUTIROSTRIS.—Testa lævi, oblonga, ad latere compressa, valde inæquilaterali, postice obtuse angulata, antice truncata; valvulis crassiusculis, antice crassioribus; natibus prominulis; epidermide tenebroso-fusca, nigriscente, eradiata; dentibus cardinalibus, parviusculis, in utroque valvulo sinuato divergente; lateralibus prælongis aliquanto curvatis granulatisque; margarita alba et valde iridescente.

Hab.—South America, Don Patricio M. Paz.

UNIO AMPULLACEUS.—Testa lævi, suboblonga, valde inflata, inæquilaterali, postice obtuse angulata, antice rotundata; valvulis crassiusculis, antice crassioribus; natibus subprominentibus, inflatis; epidermide tenebroso-fusca, rugoso-striata, eradiata; dentibus cardinalibus parvis, obliquis, lamellatis corrugatisque; margarita alba et iridescente.

Hab.—South America, Don Patricio M. Paz.

UNIO PARAGUAYENSIS.—Testa lævi, elliptica, inflata, sublenticulari, valde inæquilaterali, postice et antice rotundata; valvulis subcrassis, antice crassioribus; natibus vix prominentibus; epidermide viridi-fusca, obsolete radiata; dentibus cardinalibus crassiusculis, obliquis, compressis, in utroque valvulo duplicibus; lateralibus sublongis, lamellatis curvisque; margarita argentea et valde iridescente.

Hab.—Paraguay, South America, Don Patricio M. Paz.

MONOCONDYLÆA LENTIFORMIS.—Testa lævi, rotundata, lenticulari, valde inæquilaterali, postice rotundata, antice curta rotundaque; valvulis subcrassis, antice crassioribus; natibus prominentibus, ad apices acuminatis, retusis; epidermide tenebroso-oliva, striata, eradiata; dentibus cardinalibus parviusculis, tuberculatis; margarita albida et valde iridescente.

Hab.—South America, Don Patricio M. Paz.

MONOCONDYLÆA PAZII.—Testa lævi, obovata, inflata, valde inæquilaterali, postice rotundata, antice curta rotundaque; valvulis crassiusculis, antice aliquanto crassioribus; natibus prominentibus, tumidis, retusis; epidermide

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tenebroso-oliva, striata, eradiata; dentibus cardinalibus subcrassis, compresso-tuberculatis, subelevatis; margarita alba et valde iridescente.

Hab.—South America, Don Patricio M. Paz.

ANODONTA PAZII.—Testa lævi, subrotunda, valde inflata, inæquilaterali, postice et antice rotundata; valvulis crassiusculis; natibus subprominentibus, acuminatis; epidermide tenebroso-rufusca, eradiata, striata; margarita, punicea et fermississime iridescente.

Hab.—South America, Don Patricio M. Paz.

FASTI ORNITHOLOGICÆ.

BY JOHN CASSIN.

Woe be to the man who reads but one book!—*Rev. George Herbert.*

My starvling bull,

Alack for me,

In pasture full

How lean is he!

Rev. Thomas Fuller.

No. 2.

DER NATURFORSCHER.

A Journal for Natural History, edited by J. C. D. Schreber and J. E. J. Walch.

"Der Naturforscher" was published at Halle from the year 1774 to 1804, that is to say, during a period of thirty years, one part or volume every year, though it is usually bound in fifteen volumes, octavo. Each of the thirty parts is, however, separately paged and has a title page and date of its own, and must be considered and treated as a volume for all practical purposes. The first thirteen volumes are edited by Walch, the last seventeen by Schreber, both of whom are contributors of a large number of papers in various departments of the Zoological and Botanical Sciences. In Zoology the papers of both are mainly on groups of the Invertebrata, but the latter occasionally has a valuable article on other subjects and higher orders of animals, and is the eminent and successful author of standard and elaborate works on Mammalogy.

The illustrations in this Journal are generally very superior, many of the colored plates, of Insects and Shells especially, being much above the average of those of a similar description to be found in books of the last century, and all of them seem to be quite sufficient for the easy recognition of species. There are about one hundred and fifty plates in the series, nearly all of which are carefully colored, those of Insects being the most numerous, but of Shells, also, there are a very considerable number. Special allusion will be made to the plates of Birds towards the end of this paper. Of the contents of the entire work as published, Indices and "Registers" are given at the end of every tenth volume, apparently very copious and accurate, and from which it appears that no less than six hundred and four memoirs in all departments of Natural History are contained in these thirty volumes. In Ornithology the contributions are not numerous, and contain but few descriptions of species, but of those few descriptions, nearly all the names proposed would stand good were it not for the recently exhumed names of Prof. P. L. S. Müller. The authors of these contributions are, for the greater part, quite unknown in modern times as ornithological writers.

"Der Naturforscher" seems to have been a very considerable journal in its day, and names amongst its contributors many naturalists of standard and deservedly high reputation. The memoirs on Conchological and Entomological subjects are apparently the most valuable, and are certainly the most numerous and most carefully illustrated. For better or worse it happens that comparatively few of its many papers are devoted to Ornithology, and a large majority 1866.]